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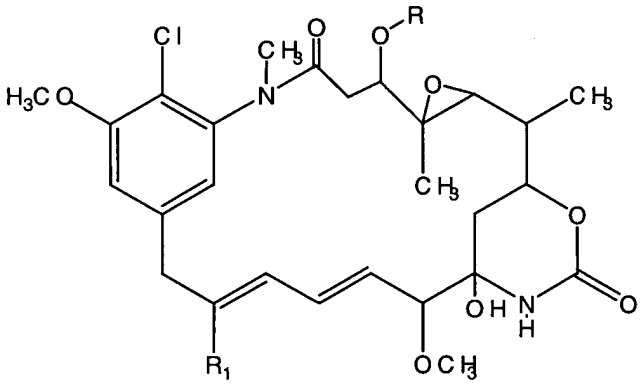
9. The enhanced *Actinosynnema pretiosum* strain according to claim 6, wherein the enhanced strain produces an ansamitocin in an amount of between 5-fold and 10-fold more than the amount produced by a parental strain from which the enhanced strain was derived.

10. The enhanced *Actinosynnema pretiosum* strain according to claim 6, wherein the parental strain is selected from the group consisting of *Actinosynnema pretiosum* strains having ATCC accession numbers 31281, 31309 and 31565.

11. The enhanced *Actinosynnema pretiosum* strain according to claim 6, wherein the ansamitocin is ansamitocin P-3.

12. A method for producing an ansamitocin, which comprises cultivating the enhanced *Actinosynnema pretiosum* strain of claim 6 in a culture medium comprising a suitable carbon source.

13. The method of claim 12, wherein said ansamitocin is one or more ansamitocins of formula (I) or isomers thereof:



(I)

wherein R is selected from the group consisting of hydrogen, acetyl, propionyl, isobutyryl, butyryl, and isovaleryl, and R_1 is selected from the group consisting of methyl and hydroxymethyl.

14. The method of claim 13, wherein R is isobutyryl and R_1 is methyl.

15. The method of claim 12, wherein said ansamitocin is ansamitocin P-3 and said carbon source comprises one or more carbon sources selected from the group consisting of valine, isobutyric acid, isobutyl alcohol, and isobutylaldehyde.

16. An enhanced *Actinosynnema* strain that produces an ansamitocin in an amount of between about 1.2-fold and about 10-fold more than the amount produced by a parental strain from which the enhanced strain was derived.

17. The enhanced *Actinosynnema* strain according to claim 16, wherein the enhanced strain produces an ansamitocin in an amount of between 1.2-fold and 10-fold more than the amount produced by a parental strain from which the enhanced strain was derived.

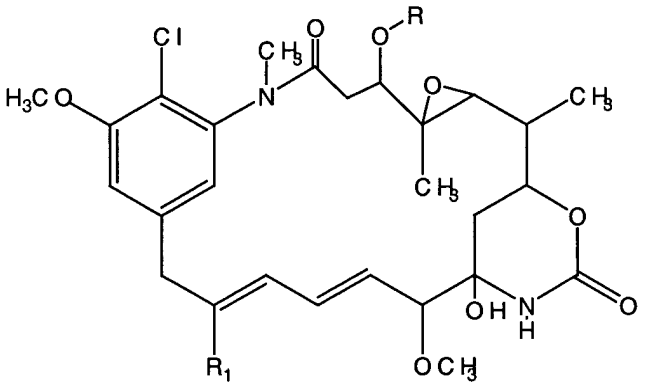
18. The enhanced *Actinosynnema* strain according to claim 16, wherein the enhanced strain produces an ansamitocin in an amount of between 1.8-fold and 10-fold more than the amount produced by a parental strain from which the enhanced strain was derived.

19. The enhanced *Actinosynnema* strain according to claim 16, wherein the enhanced strain produces an ansamitocin in an amount of between 5-fold and 10-fold more than the amount produced by a parental strain from which the enhanced strain was derived.

20. The enhanced *Actinosynnema* strain according to claim 16, wherein the ansamitocin is ansamitocin P-3.

21. A method for producing an ansamitocin, which comprises cultivating the enhanced *Actinosynnema* strain of claim 16 in a culture medium comprising a suitable carbon source.

22. The method of claim 21, wherein said ansamitocin is one or more ansamitocins of formula (I) or isomers thereof:



(I)

wherein R is selected from the group consisting of hydrogen, acetyl, propionyl, isobutyryl, butyryl, and isovaleryl, and R_1 is selected from the group consisting of methyl and hydroxymethyl.

23. The method of claim 22, wherein R is isobutyryl and R_1 is methyl.

24. The method of claim 21, wherein said ansamitocin is ansamitocin P-3 and said carbon source comprises one or more carbon sources selected from the group consisting of valine, isobutyric acid, isobutyl alcohol, and isobutylaldehyde.

25. An enhanced bacterial strain that produces an ansamitocin in an amount of between about 1.2-fold and about 10-fold more than the amount produced by a parental strain from which the enhanced strain was derived.

26. The enhanced bacterial strain according to claim 25, wherein the enhanced strain produces an ansamitocin in an amount of between 1.2-fold and 10-fold more than the amount produced by a parental strain from which the enhanced strain was derived.

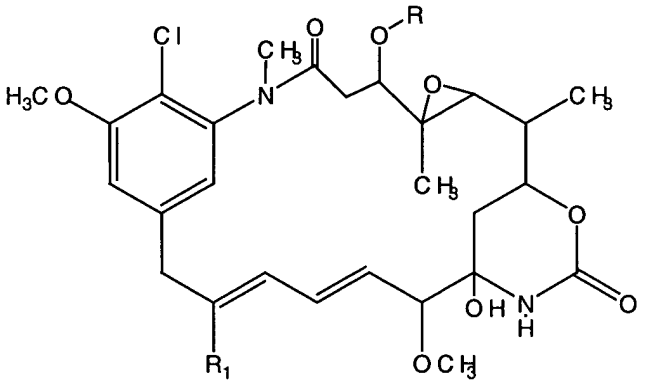
27. The enhanced bacterial strain according to claim 25, wherein the enhanced strain produces an ansamitocin in an amount of between 1.8-fold and 10-fold more than the amount produced by a parental strain from which the enhanced strain was derived.

28. The enhanced bacterial strain according to claim 25, wherein the enhanced strain produces an ansamitocin in an amount of between 5-fold and 10-fold more than the amount produced by a parental strain from which the enhanced strain was derived.

29. The enhanced bacterial strain according to claim 25, wherein the ansamitocin is ansamitocin P-3.

30. A method for producing an ansamitocin, which comprises cultivating the enhanced bacterial strain of claim 25 in a culture medium comprising a suitable carbon source.

31. The method of claim 30, wherein said ansamitocin is one or more ansamitocins of formula (I) or isomers thereof:



(I)

wherein R is selected from the group consisting of hydrogen, acetyl, propionyl, isobutyryl, butyryl, and isovaleryl, and R_1 is selected from the group consisting of methyl and hydroxymethyl.

32. The method of claim 31, wherein R is isobutyryl and R_1 is methyl.

33. The method of claim 30, wherein said ansamitocin is ansamitocin P-3 and said carbon source comprises one or more carbon sources selected from the group consisting of valine, isobutyric acid, isobutyl alcohol, and isobutylaldehyde.

34. A method of producing an enhanced bacterial strain that produces an ansamitocin in an amount of between about 1.2-fold and about 10-fold more than the amount produced by a parental strain from which the enhanced strain was derived, said method comprising:

(a) treating a culture of a bacteria that produces an ansamitocin with a mutagen,

(b) growing the treated bacteria of (a) under selective pressure,

(c) selecting for an isolate of the product of (b) that exhibits increased production of an ansamitocin compared with the culture used in (a), and

(d) optionally repeating (a), (b) and (c) until an isolate that produces between about 1.2-fold and about 10-fold more of an ansamitocin than the culture used in (a) is obtained.

35. The method of claim 34, wherein said bacterial strain is a strain of an *Actinosynnema*.

36. The method of claim 34, wherein said bacterial strain is a strain of an *Actinosynnema pretiosum*.

37. The method of claim 34, wherein the mutagen is UV light or 1-methyl-3-nitro-1-nitroso-guanidine.

38. The method of claim 34, wherein the enhanced bacterial strain produces an ansamitocin in an amount of between 1.2-fold and 10-fold more than the amount produced by the parental strain.

39. The method of claim 34, wherein the enhanced bacterial strain produces an ansamitocin in an amount of between 1.8-fold and 10-fold more than the amount produced by the parental strain.

40. The method of claim 34, wherein the enhanced bacterial strain produces an ansamitocin in an amount of between 5-fold and 10-fold more than the amount produced by the parental strain.

41. The method of claim 34, wherein the selective pressure comprises growth of the treated bacteria on CM4-1 media.

42. An enhanced bacterial strain that produces an ansamitocin in an amount of between about 1.2-fold and about 10-fold more than the amount produced by a parental strain from which the enhanced strain was derived, wherein the enhanced strain is prepared by:

(a) treating a culture of a bacteria that produces an ansamitocin with a mutagen,

(b) growing the treated bacteria of (a) under selective pressure,

(c) selecting for an isolate of the product of (b) that exhibits increased production of an ansamitocin compared with the culture used in (a), and

(d) optionally repeating (a), (b) and (c) until an isolate that produces between about 1.2-fold and about 10-fold more of an ansamitocin than the culture used in (a) is obtained.

43. The enhanced bacterial strain of claim 42, wherein said bacterial strain is a strain of an *Actinosynnema.*

44. The enhanced bacterial strain of claim 42, wherein said bacterial strain is a strain of an *Actinosynnema pretiosum.*

45. The enhanced bacterial strain of claim 42, wherein the mutagen is UV light or 1-methyl-3-nitro-1-nitroso-guanidine.

46. The enhanced bacterial strain of claim 42, wherein the enhanced bacterial strain produces an ansamitocin in an amount of between 1.2-fold and 10-fold more than the amount produced by the parental strain.

47. The enhanced bacterial strain of claim 42, wherein the enhanced bacterial strain produces an ansamitocin in an amount of between 1.8-fold and 10-fold more than the amount produced by the parental strain.

48. The enhanced bacterial strain of claim 42, wherein the enhanced bacterial strain produces an ansamitocin in an amount of between 5-fold and 10-fold more than the amount produced by the parental strain.

49. The enhanced bacterial strain of claim 42, wherein the selective pressure comprises growth of the treated bacteria on CM4-1 media.